



U.S. Department
of Transportation
Pipeline and
Hazardous Materials
Safety Administration

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE NUMBER USA/0335/S-96, REVISION 7

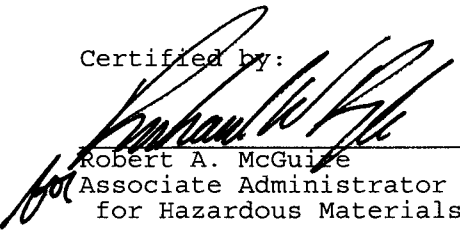
400 Seventh Street, S.W.
Washington, D.C. 20590

This certifies that the sources described have been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency¹ and United States of America² for the transport of radioactive materials.

1. Source Identification - QSA Global, Inc. Model 875 Series.
2. Source Description - Cylindrical single or double encapsulations with the outer capsule made of Type 304L stainless steel and tungsten inert gas welded. Approximate outer dimensions are 6.35 mm (0.25 in.) in diameter and either 19.05 mm (0.75 in.) or 24.2 mm (0.954 in.) in length. Inner capsules, when present, are made of stainless steel or titanium. Construction of the outer capsule shall be in accordance with attached AEA Technology QSA, Inc. Drawing No. R875 OUTER, Rev. B. Construction of any inner capsule shall be in accordance with attached Amersham Corporation Drawing No. 875 INNER, Rev. A or AEA Technology QSA, Inc. Drawing No. R 87527, Rev. B.
3. Radioactive Contents - No more than either 8.88 TBq (240 Ci) of Iridium-192 as a solid metal; 8.14 TBq (220 Ci) of Cobalt-60 as a solid metal; 7.4 TBq (200 Ci) of Ytterbium-169 as Yb₂O₃; 5.56 TBq (150 Ci) of Selenium-75 as an encapsulated solid metal; 1.11 TBq (30 Ci) of Cesium-137 as encapsulated CsCl₂; or 1.85 TBq (50 Ci) of Thulium-170 as Tm₂O₃.
4. Quality Assurance - Records of Quality Assurance activities required by Paragraph 310 of the IAEA regulations¹ shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors and consignees in the United States exporting or importing shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.
5. Expiration Date - This certificate expires January 31, 2008. On February 28, 2006, this certificate supersedes all previous revisions of USA/0335/S-96.

This certificate is issued in accordance with paragraph 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the petition and information dated December 12, 2005 submitted by QSA Global, Inc., Burlington, MA and in consideration of other information on file in this Office.

Certified by:


Robert A. McGuire
Associate Administrator
for Hazardous Materials Safety

JAN 19 2006

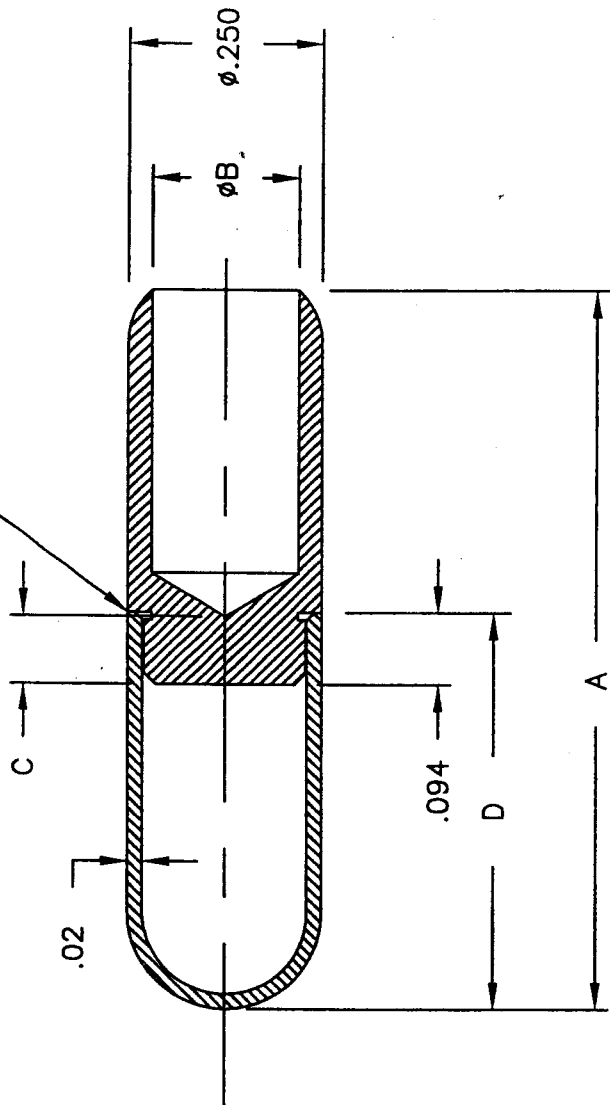
(DATE)

Revision 7 - Issued to increase the Se-75 activity.

¹ "Regulations for the Safe Transport of Radioactive Materials, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

² Title 49, Code of Federal Regulations, Parts 100 - 199, United States of America.

TUNGSTEN INERT GAS WELDED



CAPSULE NO.	A	ØB	C	D
87501	.954	.190	.150	.522
88702	.750	.190	.118	.522

NOTES:

1. INTERNAL VOID TO BE 0.010 mL OR GREATER.
2. MATERIAL: 304L STAINLESS STEEL.



DESCRIPTIVE
DRAWING

40 NORTH AVE, BURLINGTON, MA 01803

TITLE

875 SERIES
SSDR OUTER CAPSULE

SIZE	DWG. NO.	REV
A	R875 OUTER	B

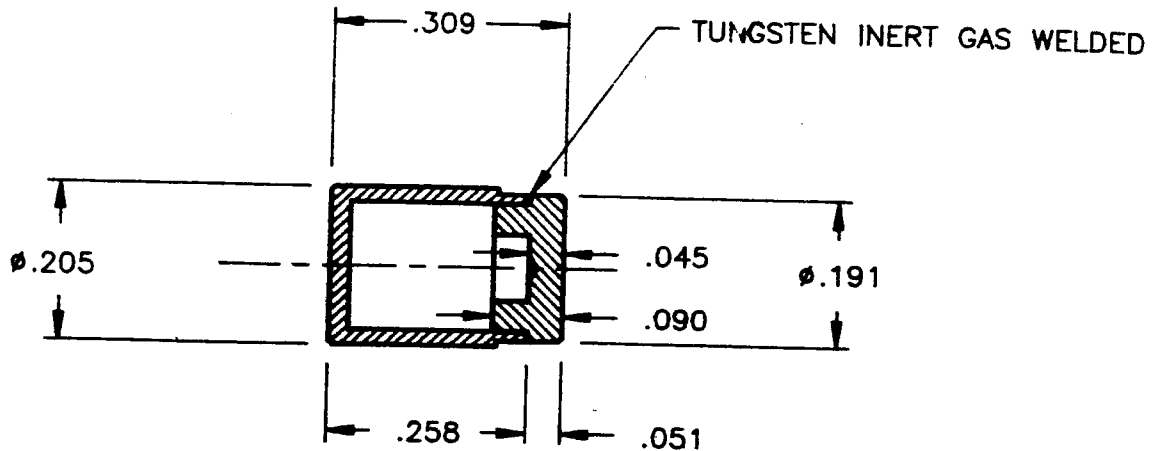
SCALE: NONE SHEET 1 OF 1

DIMENSIONS IN INCHES
TOLERANCES:

FRACTIONS: ±1/16
X ± 0.1
XX ± 0.01
XXX ± 0.005

ERF #	APPROVALS	DATE
213	<i>[Signature]</i>	21 MAR 02
	<i>[Signature]</i>	21 MAR 02
	<i>[Signature]</i>	21 MAR 02

REV	ENGINEER	DATE	DESCRIPTION
A	G. PARSONS	05-13-93	INITIAL RELEASE ECO# 1378

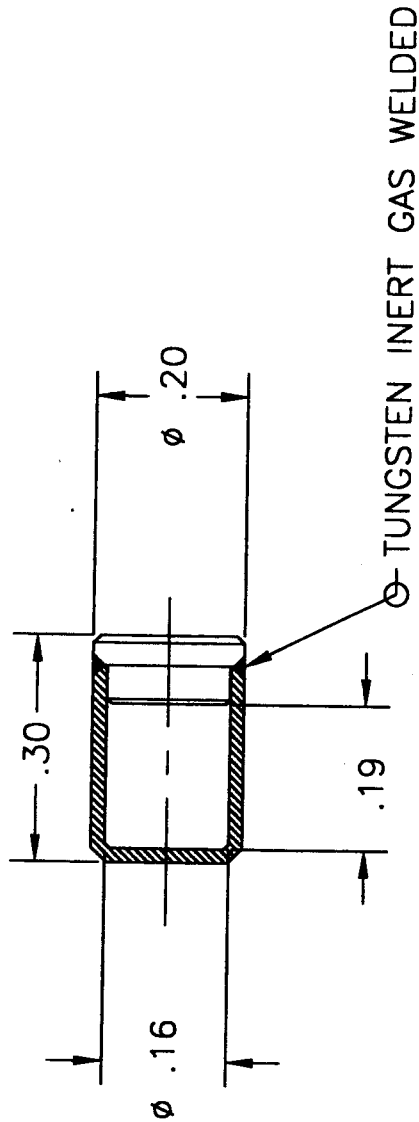


MIN. WALL THK. TO BE .019

NOTES:




1. INTERNAL VOID VOLUME TO BE 0.010 mL OR GREATER
2. INNER CAVITY DIMENSIONS MAY VARY. METALLIC SPACERS, SPRINGS AND GUARDS WHICH SECURE AND/OR LOCATE THE RADIOACTIVE MATERIAL WITHIN THE CAPSULE MAY BE USED.

USED ON:			RELEASED FOR PRODUCTION ON _____ BY _____		
MATERIALS: 304L ST. STL.			AMERSHAM CORPORATION BURLINGTON, MA 01803 Amersham		
FINISH			DWG. TITLE		
DATE: 5/13/93			875 SERIES INNER CAPSULE DESCRIPTIVE DRAWING		
PREPARED	T. ABBOTT	5/11/93			
ENGINEER					
CHECKED	G.P.	5-13-93			
APPROVED	6-4-93				
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE			CLASSIFICATION	SIZE	DWG. NO.
.X ±0.1			NA	A	875 INNER
.XX ±0.01					
.XXX ±0.005					
ANGLES ±1°					
FRACT ±1/64					
SCALE			SHEET 1 OF 1		



NOTES:

1. NON SPECIAL FORM VERSION OF X540 CAPSULE.
2. MATERIAL: 316L STAINLESS STEEL OR EQUIVALENT.
OPTIONAL MATERIAL: COMMERCIALLY PURE TITANIUM, GRADE 4.
3. INNER CAVITY DIMENSIONS MAY VARY. METALLIC SPACERS, SPRINGS AND GUARDS WHICH SECURE AND/OR LOCATE THE RADIOACTIVE MATERIAL WITHIN THE CAPSULE MAY BE USED.
4. MINIMUM WALL THICKNESS TO BE 0.009.

UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE INCHES, TOLERANCE $\pm 1/16$		 40 NORTH AVE, BURLINGTON, MA 01803		DESCRIPTIVE DRAWING	
DDCO #39	 21 May 99	 21 May 99	B	TITLE	X540N CAPSULE ASSEMBLY
DESCRIPTION	APPROVALS	DATE	LTR	SIZE	DWG. NO. R 87527
REVISIONS			SCALE: NONE	SHEET 1 OF 1	REV B